Johnny M Mine Radiation Impacts to the w1/2 of Section 18, T 13N, R8W McKinley County, New Mexico SM9000 (b) (6) Property)

March 12, 2011

The Johnny M Mine uranium mine began operations in 1972 with Ranchers Exploration and Development as the operator. The mine was discharging 1,000,000 gallons of water per day to two ponds on the property. The north pond and the south pond are settling ponds. Each of the ponds are approximately 100 feet by 400 feet by 15 feet deep. $BaCl_2$ was mixed in this water to cause the solids to settle out. These ponds would discharge water to an open ditch, which is next to the south pond. (southeast end of the pond) This ditch was replaced by a 12" transite pipe in March 1, 1978 as indicated in a map. (Pre-CERCLIS Screening Assessment of the Johnny M Mine dated August 16,2010 prepared by NMED, JM PCS Ref 3B) This pipe directed the flow into the San Mateo Creek. Adjacent to the south pond is an arroyo then trends to the southwest across the (b) (6) Property. It appears that water was discharged into this arroyo. On the west end of the drainage near the west fence property line, is an area that was found to have elevated readings by the Rapid Assessment Tool (RAT) Survey. Surface and subsurface soil samples have been collected from this area. This analysis is not yet available. Another area, which is located in the southeast area of the SM9000 property, has indicated high levels of radiation from the Ludlum 2221 meter. (RAT Map of the Stables, RAT Map of Home, RAT Map of Entire Property)

An aerial photograph that was taken by USGS dated June 9, 1981, indicates piles of dark material that are on both the east side and the west side of the former haul road. These piles appear to be piles that placed there by dump trucks. This material is believed to be uranium mill tailings that were trucked from the former Kerr McGee Uranium Mill that was located at Ambrosia Lake. We have collected soil samples that have had isotopic analysis performed. We feel that uranium mill tailings are present in the soil. These uranium mill tailings were hauled from 1977-1982. Approximately 8,000 tons of mill tailings per month were hauled to the mine by truck. A total of 286,000 tons were hauled to the Johnny M and slurried (50 % by volume mill tailings that were mixed with mine discharge water) into the mine thru the north vent hole and the south vent hole to prevent the flooding of the mine. The dimensions of the west area are 620 feet length x 235 feet in width (approx. 3 acres). The dimensions of the east area are 415 feet length x 200 feet in width (approx. 2 acres).

The present location of the home is in the area of west pile area (north end) and the west corral is in the west area (south end). The home and the corrals location are superimposed on the USGS photograph dated June 1981. (Map and sampling table is included.)

The former haul road to the Johnny M Mine extends approximately 1 mile thru the SM9000 property from Highway 605 on the south end to the former entrance to the mine on the north end. The readings that we have taken with the radiation meter Ludlum 2221 with a 2x2 NaI detector indicate elevated

gamma levels. The range of these readings are 30,000 to 39,000 cpm. No soil samples have been collected from along the haul road.

Elevated radon levels have been identified in the home and in the crawl space. The MCL has been exceeded in the groundwater well for gross alpha and Radium -226/228.